

WHAT ARE MICROBICIDES?

Microbicides refer to a range of products that may be applied vaginally or rectally to reduce the transmission of HIV and potentially other STIs during sexual intercourse. These substances can take many forms including creams, films, gels, suppositories, sponges or rings that release active ingredients over time. Microbicides are ideal for HIV prevention because they are in the control of the person using them. They are discreet and they give individuals greater choice regarding HIV protection.

ARE MICROBICIDES SAFE AND AVAILABLE NOW?

Microbicides are currently unavailable for use as clinical research is still taking place to ensure their safety and efficacy. There are at least eleven microbicide candidates that have been proven effective and safe on animals and which are presently being tested on humans. If, after rigorous testing, one of these candidates proves successful, researchers hope to have microbicides available to the public in five to seven years.

WHY ARE MICROBICIDES IMPORTANT?

More prevention technologies mean more selection thus providing a greater likelihood to meet the varying needs of each individual. While condoms, used properly, decrease the transmission of HIV and other STIs, they are still not always used for various reasons: they are expensive, individuals want to conceive, or the negotiation of condom use is difficult, particularly in situations where there is a power imbalance. Whatever the reason, current HIV prevention methods are limited and alternatives are needed. Microbicides would enable individuals to protect themselves without becoming dependent on their partners' cooperation which can be particularly beneficial in relationships where the risk of violence or abuse is present.

WHY DOESN'T A MICROBICIDE ALREADY EXIST?

There are many factors that may impede the development of microbicides ranging from clinical research ethics and boundaries, lack of

funding for scientific development and/or lack of political will. Currently, funding for microbicides comes primarily from the public sector either from governments or philanthropic donors.

WOULD A MICROBICIDE ELIMINATE THE NEED FOR CONDOMS?

No. If used consistently and correctly, condoms still provide the best protection. The most effective microbicides currently under development still only offer 60% protection, which is very significant in terms of population health impact.

WHICH STIS WOULD A MICROBICIDE PROTECT AGAINST?

Ideally, a microbicide may combine different active ingredients to target multiple STIs. However most microbicides currently undergoing testing aim to prevent HIV and potentially one other STI.

WILL PREGNANCY BE POSSIBLE WHILE USING A MICROBICIDE?

Of the microbicides currently being tested, some prevent pregnancy and some do not. Having microbicides that both prevent HIV yet allow women to safely conceive would be ideal.

WHAT IS A VACCINE?

A vaccine is a substance used to improve the immunity to a particular disease or infection. An individual is injected with a killed microbe (bacteria or virus) which stimulates the immune system to fight against the microbe and therefore prevent the disease.

WHAT IS AN HIV VACCINE?

An HIV vaccine would boost the human immune system so that it would not succumb to the virus that weakens the human immune system. It could also make HIV positive recipients less likely to infect other people with the virus.

IS AN HIV VACCINE CURRENTLY AVAILABLE?

No. Such a product is in various stages of clinical trials but presently is not available for use. Research for a vaccine has been and continues to be a long process that includes basic laboratory research, product development, and animal experiments. Since 1987, more than thirty HIV candidate vaccines have been tested in approximately sixty phase one and two trials involving more than ten thousand healthy volunteers. Presently, there are only two candidate vaccines being evaluated in phase three trials.

WHY WOULD AN HIV VACCINE BE IMPORTANT?

Current HIV prevention technologies are limited in scope. Currently HIV prevention primarily focuses on either abstinence or condoms, which are effective when used correctly and consistently. Having an HIV vaccine would be an additional prevention tool providing it is safe, accessible and effective. Research has demonstrated that the use of vaccines as a therapeutic intervention tool when used in association with antiretroviral therapies could help to lower the cost of treatments and would increase long term efficacy.

IDEALLY, WHAT WOULD THIS VACCINE LOOK LIKE?

An ideal vaccine would be safe, accessible, inexpensive, easy to manufacture on a large scale, effective against multiple HIV strains, have long lasting immunity and be easy to ship and distribute globally.

WHAT IS THE CURRENT COST OF SUCH A VACCINE?

The global investment to HIV vaccine initiatives is approximately five hundred million US dollars per year. This cost includes industry and research agencies in industrialized countries. While this number may seem large, the investment must be increased to build capacity in developing countries in order to conduct trials.

ONLINE RESOURCES:

- ▶ **Alliance for microbicide development:**
www.microbicide.org
- ▶ **Global campaign for microbicides:**
www.global-campaign.org
- ▶ **International Partnership for Microbicides:**
www.ipm-microbicides.org
- ▶ **The Body:**
www.thebody.com/content/art1748.html#vaccines
- ▶ **The WHO:**
www.who.int/hiv/topics/vaccines/Vaccines/en/
- ▶ **International AIDS Vaccine Initiative:**
www.iavi.org/